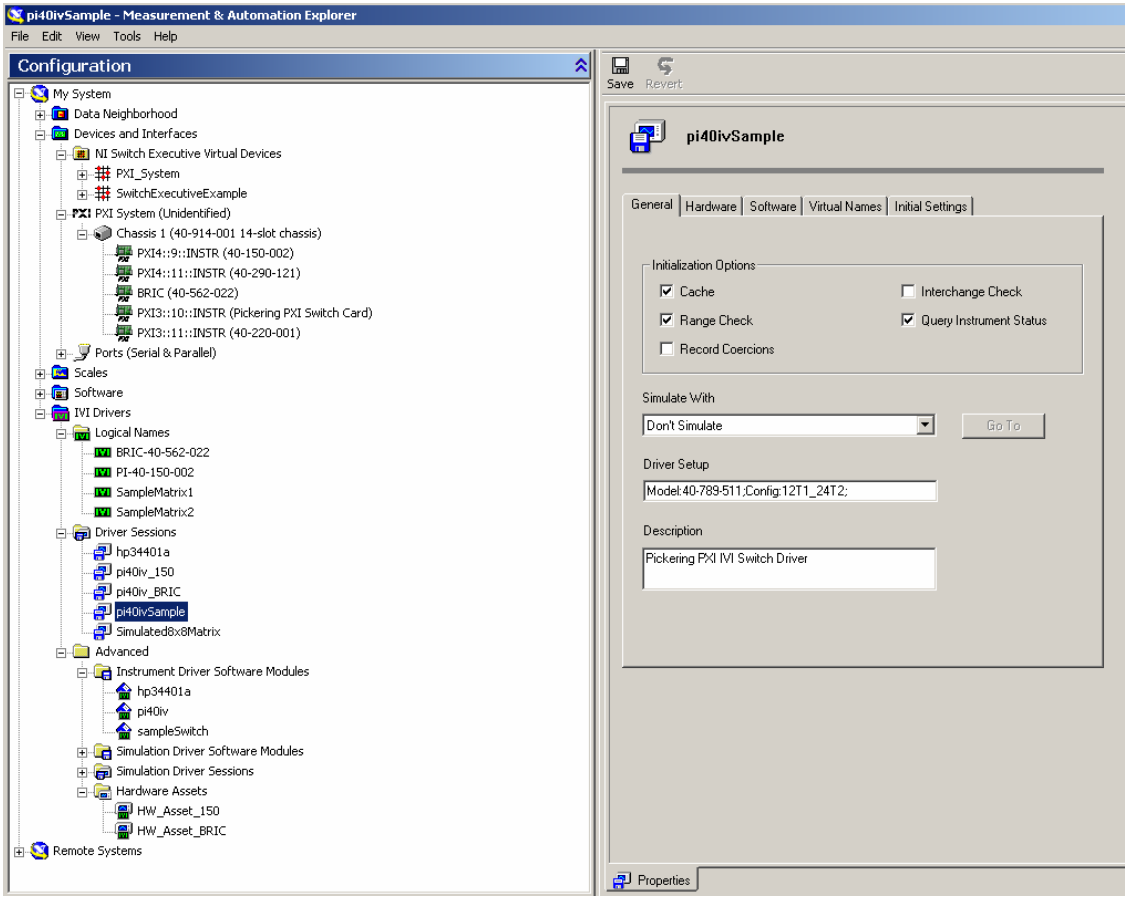
PI Switching with NI Switch Executive

How to setup MAX to use Pickering Interfaces Switches with NI Switch Executive

The Pickering Interfaces IVI installation pi40iv.msi places an example driver session (pi40ivSample) into the MAX configuration (see picture below). There is also an entry in the Instrument Driver Software Modules folder (pi40iv). All created devices for PI switch modules will relate to these entries. Each instrument used must have a valid resource descriptor in the Hardware Assets folder or the “Simulate with” entry field is set to “Specific Driver” otherwise an error will occur when creating a Switch Executive Virtual Device.

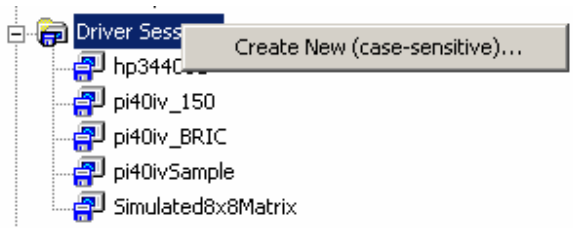


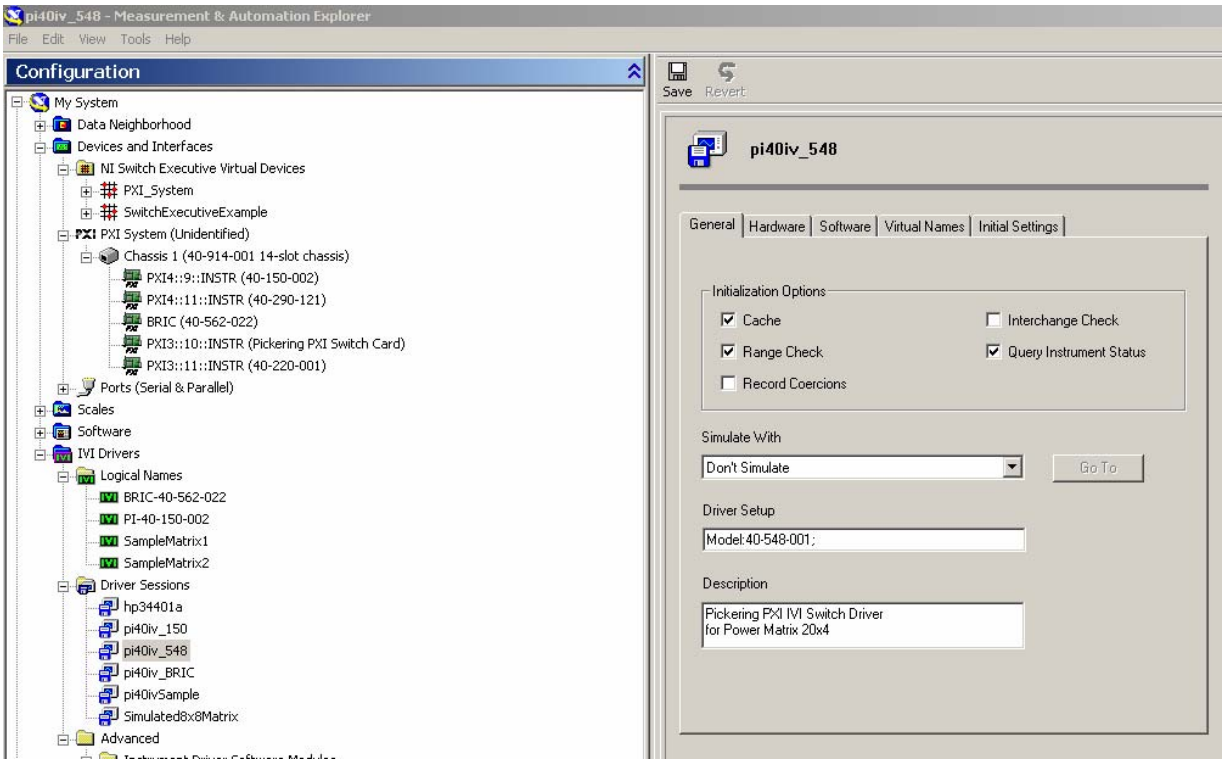
The easiest way to setup MAX for Pickering Interfaces switch modules is to *Create a New Driver Session* and copy, paste and change the appropriate fields from pi40ivSample. This will be described on the following pages. Repeat the described Step 1 to Step 5 for each module to be inserted into the MAX configuration.

Example: adding PI module 40-548-001 to the NISE

Step 1

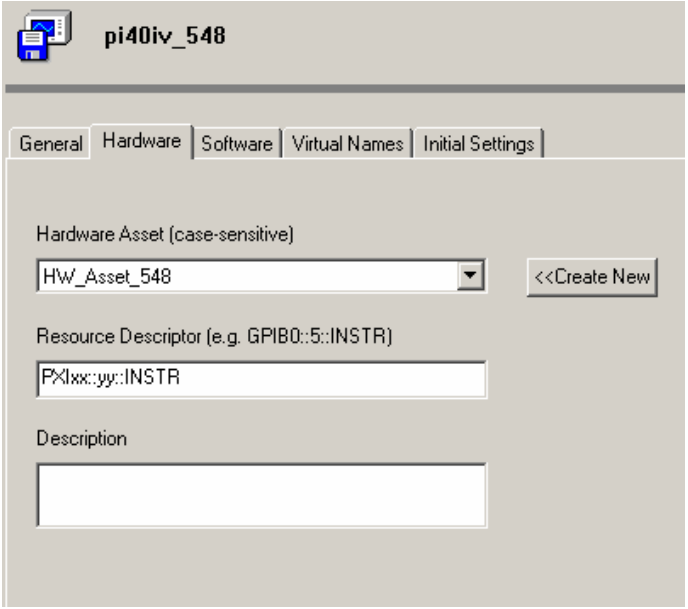
Create New Driver Session by right clicking the Driver Session folder



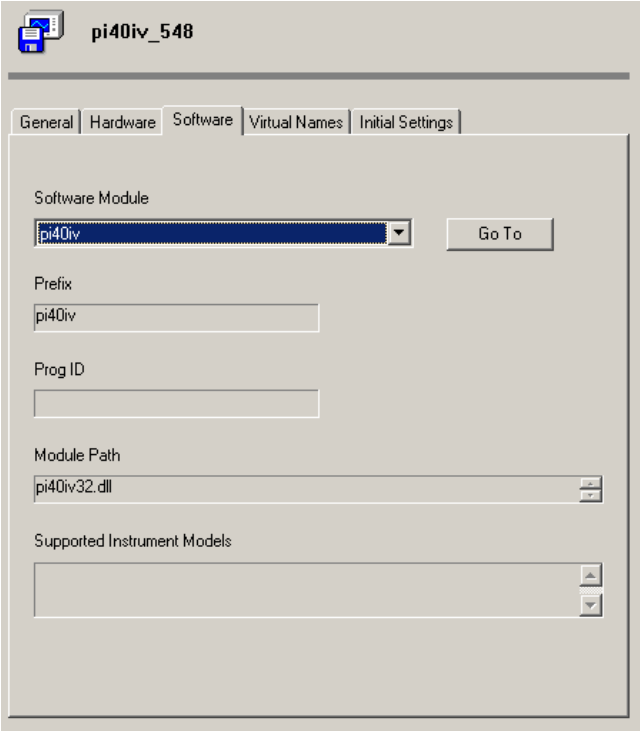


In the driver's general tab the most important entry is the model description: ***Model:40-548-001;***

In the driver's hardware tab a hardware asset with the exact resource description for each module has to be selected. If required create a new asset and change the descriptor.

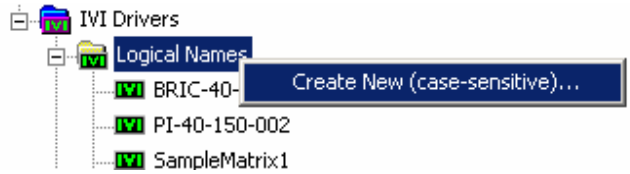


In the driver's software tab select the pi40iv as the necessary software module.



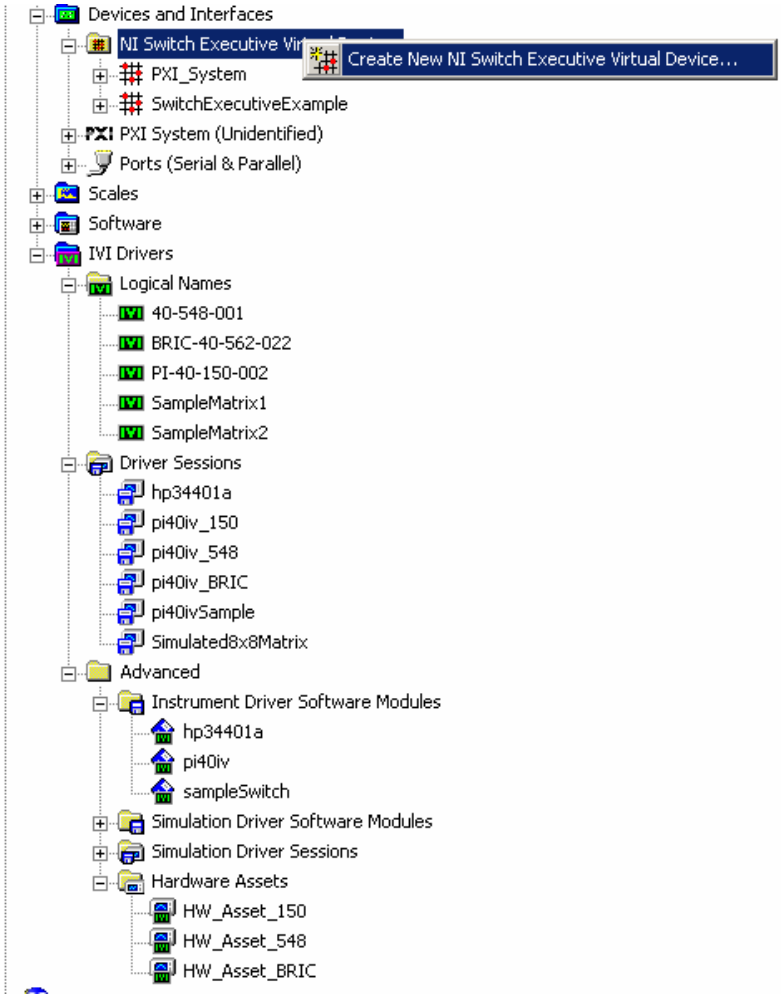
Step 2

Create New Logical Names by right clicking the Logical Names folder. A driver session for the logical name has to be selected in the consecutive window. These logical names will appear in the later defined Switch Executive Virtual Device.



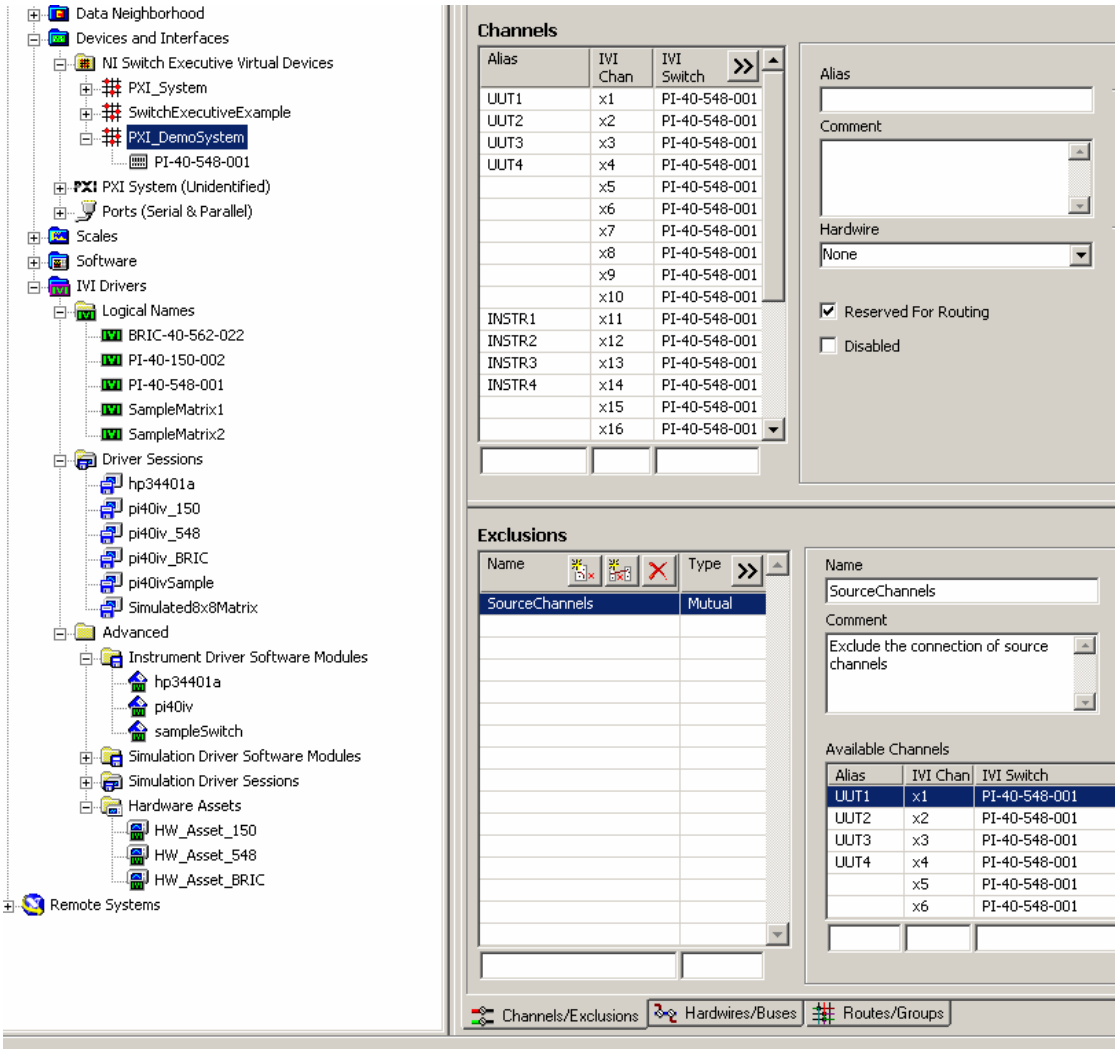
Step 3

Create New Switch Executive Virtual Device by right clicking the Switch Executive Virtual Device folder. Add all necessary devices from the list. All system modules which have to be interconnected must be listed in one device.



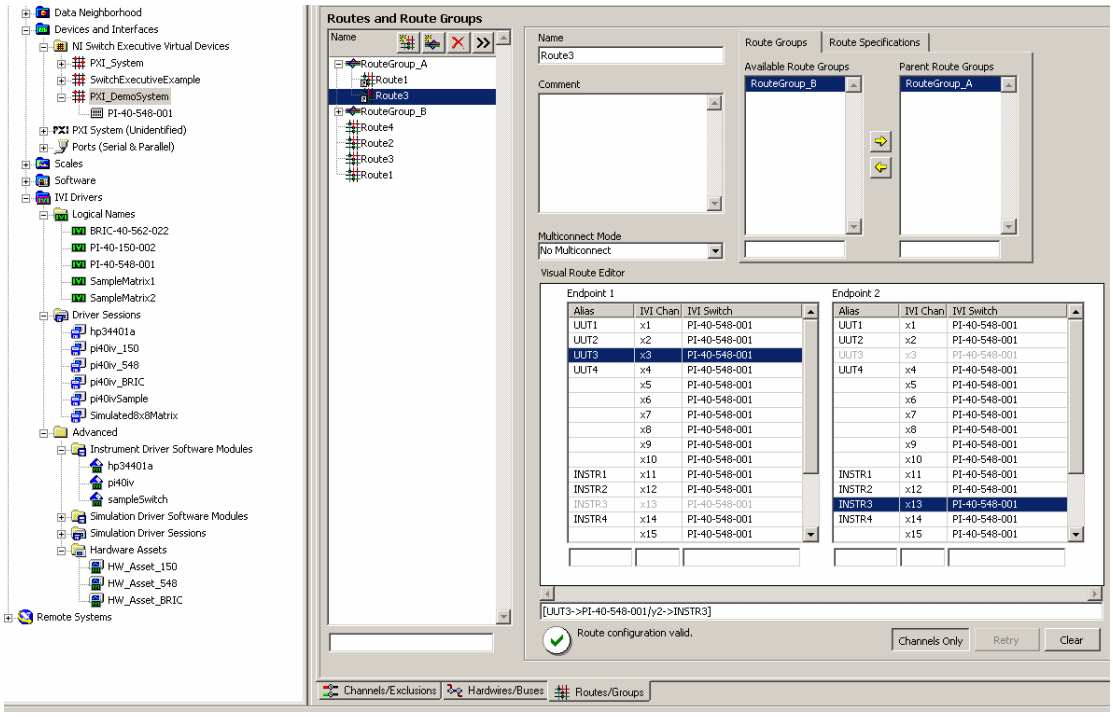
Step 4

Edit the IVI channel alias names, check the channels which will be reserved for routing (usually the y-channels). In the example no exclusion are defined.



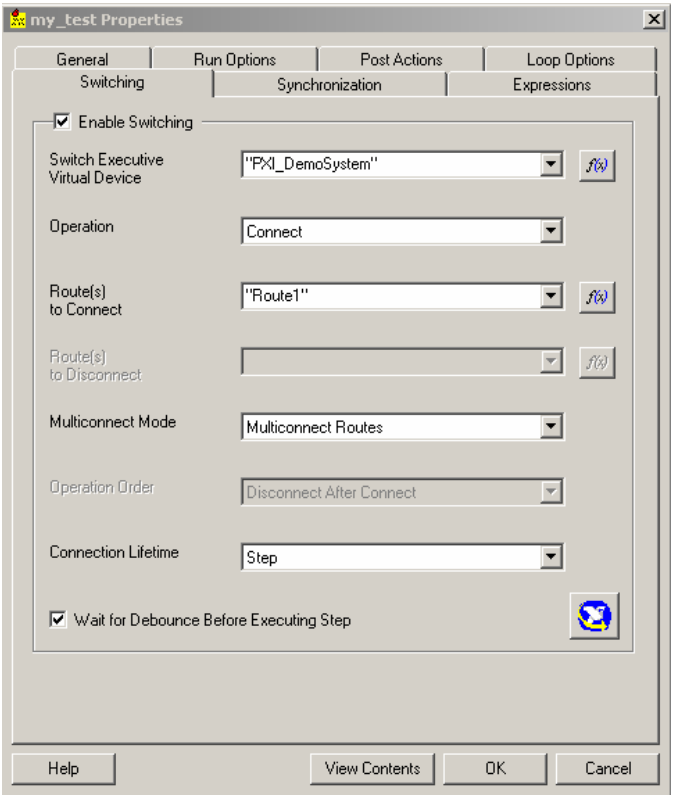
Step 5

Edit Routes and Route Groups as your connections require.

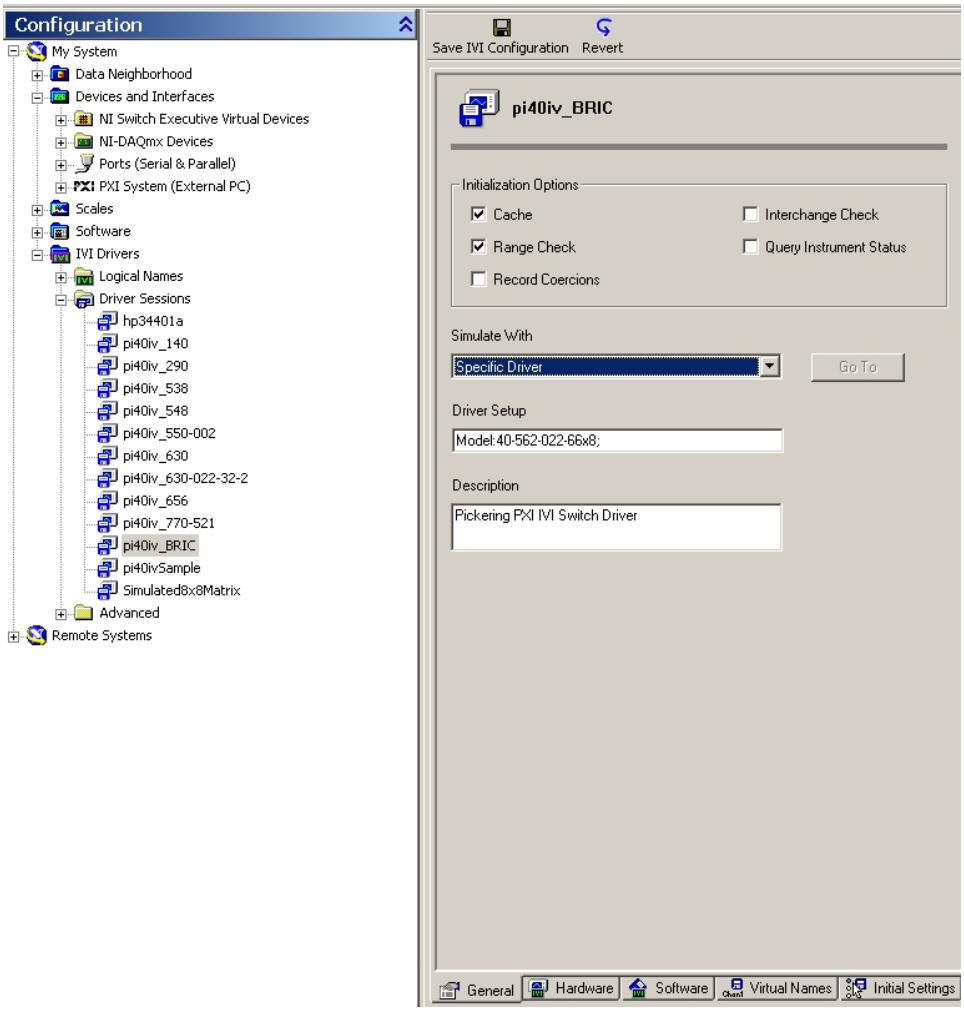


TestStand

Launch TestStand. Create a simple test sequence with one test step. Right click the test step and select ***Properties***. In the Switching tab the required switching can now be selected.



“Simulation”

It is not really a simulation, it’s just to avoid errors when the driver talks to the hardware which is not there… As the simulation for switching is actually the simulation of a selftest, returning an error number or returning the module revision it would not make sense to create a simulation device.

In the MAX module driver session section, select in tab *General* **Simulate with “Specific Driver”** instead of **“don’t simulate”** (all modules in the virtual device have to be changed like that), then whenever switching is performed no error will popup.